

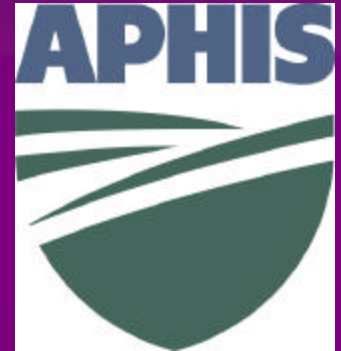
# **Exotic Pest Information: Selected CPHST Initiatives...**

**Woody Bailey**

**USDA, APHIS, PPQ**

**Center for Plant Health Science and Technology**

**Raleigh, NC**





ORGANISATION NORD AMERICAINE POUR LA PROTECTION DES PLANTES  
NORTH AMERICAN PLANT PROTECTION ORGANIZATION  
ORGANIZACION NORTEAMERICANA DE PROTECCION A LAS PLANTAS  
CANADA UNITED STATES MEXICO

# **I. The NAPPO Phytosanitary Alert System**

**[www.pestalert.org](http://www.pestalert.org)**



# Phytosanitary Alert System

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**Notice to PAS Subscribers:** If you are not receiving email notifications about new pest alerts and new stories please [click here](#) and send us an email with the subject heading of "PAS emails". Thank you.

## Official Pest Reports

**Pest News Stories** (short news stories about recent pest developments)

**Pest Alerts** (datasheets for exotic pests of concern)

**Search pest alerts and news by a keyword:**

**Subscriptions** to Pest Alerts and Pest News subscribe for e-mail notification of new pest alerts and news stories!

The **North American Plant Protection Organization's** (NAPPO) Phytosanitary Alert System

- provides pest alerts and news of emerging plant pests of significance to North America
- is intended to facilitate awareness, detection, prevention and management of exotic species in North America
- for more information, see **"Who Are We?"**

**NAPPO Executive Director:**  
Ian McDonell

**NAPPO Phytosanitary Alert System  
Panel Members:**

Heather M. Hartzog, U.S.A. (Chairperson)  
Woodward D. Bailey, U.S.A.



# Phytosanitary Alert System

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## Pest Alerts :Recent

Results of Pest List Search: **Recent** [6 records]

marked red are older records recently updated [within 30 days]

Posted	Updated	Click on pest name to view the entire report	Sort by: <b>Common Name</b>   <b>Scientific name</b>
Apr-24/03	Apr-24/03	<b>Asian wood borers and slug caterpillar: Interceptions on Korean Bonsai Trees</b> <a href="#">Cerambycidae larvae and Limacodidae pupa</a> Canadian Pest Interceptions on Korean Bonsai Trees	
Dec-17/02	Nov-21/03	<b>Emerald Ash Borer</b> <a href="#">Agrilus planipennis</a> <b>Fairmaire 1888</b> Exotic Emerald Ash Borer (EAB), <i>Agrilus planipennis</i> , reported in the United States and Canada	
Apr-08/02	Apr-08/02	<b>Oriental rice thrips</b> <a href="#">Stenchaetothrips biformis</a> <b>Bagnall</b> Old World pest of rice poised to enter North America	
Jan-29/02	Jan-29/02	<b>Spade-leaf plant (aquarium trade)</b> <a href="#">Gymnocoronis spilanthoides</a> (D. Don) DC. Potential aquatic weed for North America widespread in aquarium trade	
Jan-29/02	Jan-29/02	<b>Giant bramble (Australia)</b> <a href="#">Rubus alceifolius</a> <b>Poir</b> Giant bramble poses a potential threat to tropical and subtropical environments in North America.	
Jan-29/02	Jan-29/02	<b>Crabgrass</b> <a href="#">Digitaria ternata</a> (A.Rich.) <b>Stapf 1898</b> Another species of <i>Digitaria</i> a potential North American invader	

BACK



## Cerambycidae larvae and Limacodidae pupa

Canadian Pest Interceptions on Korean Bonsai Trees

### IDENTITY

**Name:** Cerambycidae larvae and Limacodidae pupa

**Taxonomic Position:**

Animalia : Arthropoda : Insecta:

**Common Names:** Asian wood borers and slug caterpillar: Interceptions on Korean Bonsai Trees

**Significance:**

On March 28, 2003 the Canadian Food Inspection Agency found severe insect damage on bonsai trees originating in Korea during a routine import inspection. The inspector found evidence of multiple quarantine-significant pests.

[Click here for the enlargement of this photo or for additional images](#)



**Issues of Concern:** The movement of pests via bonsai plants is a recognized pathway for the introduction of exotic longhorned beetles. The affected host genera in this interception included *Acer*, *Carpinus* and *Juniperus*. The shipment also contained *Rhododendron* and *Ilex* species that appeared to be unaffected. On the *Acer* and *Carpinus* plants large tunnels and exit holes similar to those caused by *Anoplophora* spp. (Cerambycidae) were found. Some of the tunnels contained excelsior and in one case a larval head capsule was recovered. On the *Juniperus* plants, tunnels resembling those caused by *Callidiellum* were found. *Callidiellum rufipenne* (Cerambycidae) is an Asian wood borer frequently intercepted species in wood packaging and dunnage materials. On one of the plants a viable pupa belonging to the family Limacodidae (Lepidoptera) was collected. Larvae of the species in this family are commonly known as slug caterpillars due to their ornamentation. Some species have spines that can produce a painful sting. Limacodid larvae are foliage feeders on a wide variety of deciduous trees and shrubs. Most species



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## News Stories

### Recent news stories concerning pest outbreaks

Warning: The following pest reports have not yet been confirmed with the appropriate National Plant Protection Organization. They are provided solely as an early warning to NAPPO countries, and all National and Regional Plant Protection Organizations should use this information with caution.

**Subject : First Report of *Pseudocercospora albida* (Matta & Belliard) on red kidney bean (*Phaseolus vulgaris* L.) in North America**

**Date posted:** November 17, 2003

**Source:** Disease Notes

**News:** In August of 2002, white leaf spot disease (*Pseudocercospora albida* (Matta & Belliard)) was observed on red kidney bean (*Phaseolus vulgaris* L.) in three fields near Staples, Minnesota. The causal pathogen was identified via light and electron microscopy. Younger leaves remained relatively symptomless but older leaves had lesions covering the majority of the leaf surfaces. Historically the distribution of this fungus has been limited to a few Latin American countries with preference to the cooler climates at higher altitudes. Impact of this pathogen on bean yield in Minnesota was not determined but in the highlands of Colombia, where white leaf spot is endemic, yields can be reduced as much as 47%. This is the first report of *Pseudocercospora albida* on dry bean in North America.

### For the full story see:

del Río, L.E., C.A. Bradley, and R.S. Lamppa. 2003. First report of white leaf spot of dry bean caused by *Pseudocercospora albida* in North America. Plant Disease 87:



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### Official Pest Reports : **United States**

Official Pest Reports are provided by National Plant Protection Organizations within the NAPPO region. These Pest Reports are intended to comply with the International Plant Protection Convention's [Standard on Pest Reporting](#), endorsed by the Interim Commission on Phytosanitary Measures in March 2002.

#### **Alert for Trade in *Achatina spp.*, Giant African Snails, as Pets** - November 14, 2003

In recent days, APHIS inspectors have seized almost 100 specimens of *Achatina fulica*, Giant African Snails, in commercial pet stores and from a private breeder in Wisconsin. Initial Internet searches have indicated that there may be significant private ownership of Giant African Snails resulting in the sale of the snails by commercial businesses and private citizens. There are reports that these snails may also be available at exotic animal shows and "swap meets." Presently, the pest is only known to be established in Hawaii. Possession of this snail is **ILLEGAL** in the continental United States.

Giant African Snails, *Achatina achatina* (L.), *Achatina fulica* Bowdich, and other species in the family Achatinidae (Gastropoda), are large, terrestrial snails of African origin that cause extensive damage to plants in tropical and subtropical agricultural systems and the environment. These snails also carry serious diseases which can affect humans, including *Angiostrongylus cantonensis* and, potentially, *A. costaricensis*. These diseases can be contracted by ingesting improperly cooked snail meat, or by handling live snails and transferring the snail mucus to human mucus membranes (eyes, nose, and mouth). Snails should be handled carefully with latex gloves. Shells of mature Giant African Snails are brown in color with darker, irregular, longitudinal marks and attain lengths of nearly eight inches (20 cm) and widths of almost four inches (10 cm). Eggs are ovate, average an inch or more in length, creamy white to yellow in color and may have brown blotches. Species in this group inhabit many African countries; Indo-Pacific areas including Hawaii, Brazil; and parts of the Caribbean Basin including Barbados, St. Lucia, Martinique, and Guadeloupe. Like other exotic land snails, Giant African Snails may enter the United States as hitchhikers on imported cargo. However, PPO has intercepted these pests more frequently at airports from arriving international

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Official Pest Reports are provided by National Plant Protection Organizations within the NAPPO region. These Pest Reports are intended to comply with the International Plant Protection Convention's [Standard on Pest Reporting](#), endorsed by the Interim Commission on Phytosanitary Measures in March 2002.

**[Ralstonia solanacearum, Race 3 \(Biovar2\) intercepted on imported Pelargonium spp.: trace back, survey and regulatory action.](#)** - November 12, 2003

Barbara Peterson, Commodity Officer, Horticulture Section, Canadian Food Inspection Agency, [peterstonb@inspection.gc.ca](mailto:peterstonb@inspection.gc.ca)

*Ralstonia solanacearum* is a serious plant pest causing brown rot of potato and bacterial wilt of tomato. Several "races" of *R. solanacearum* exist and are differentiated by their distribution and host range. Race 3 (Biovar2) is the only race that survives in cooler, temperate climates. It has established in northern Europe and is likely to be capable of establishing in some regions of Canada. Race 3 (Biovar2) is cited on the NAPPO list of A1 quarantine pests and is not currently considered established in North America.

On February 14, 2003, the Canadian Food Inspection Agency (CFIA) was notified by the US Department of Agriculture (USDA) that the bacterial plant disease, *Ralstonia solanacearum* Race 3 (Biovar2) had been found in a number of greenhouses that imported geranium (*Pelargonium* spp.) cuttings from a single producer in Kenya. Trace backs revealed that five greenhouses in Canada received plant material from infected US greenhouses. All five Canadian greenhouses that were identified as receiving suspect geraniums were tested and all test results were negative for *Ralstonia*. All suspect geraniums in these five greenhouses were destroyed. The greenhouses were then visually monitored for *Ralstonia* every two weeks prior to shipping with symptomatic plants submitted to the CFIA lab in Ottawa for testing. In addition, the CFIA conducted a *Ralstonia* survey of imported geraniums during April and May of 2003. Geraniums from all foreign origins, including the US, were included in the survey which involved visual



# **Emerging Exotic Pest Data Mining...**

**Past and Future**

# Top Websites/Databases for International Pest Information

- European and Mediterranean Plant Protection Organization:  
(<http://www.eppo.org/index.html>)
- British Society for Plant Pathology (BSPP) New Disease Reports:  
(<http://www.bspp.org.uk/ndr/>)
- From the Pacific Rim:
  - **Queensland Government:** <http://www.nrm.qld.gov.au/>
  - **Department of Agriculture- Western Australia:**  
<http://www.agric.wa.gov.au/>
  - **Secretariat of the Pacific Community Plant Protection Service:**  
<http://www.spc.org.nc/pps/>
  - **Australian Quarantine and Inspection Service:**  
<http://www.affa.gov.au/content/output.cfm?ObjectID=3E48F86-AA1A-11A1-B6300060B0AA00014>
  - **Ministry of Agriculture and Forestry, New Zealand:**  
<http://www.maf.govt.nz/MAFnet/index.htm>
- Fundecitrus- Fund for Citrus Plant Protection:  
<http://www.fundecitrus.com.br/indiceus.html>
- Israel Journal of Plant Protection Sciences:  
<http://www.phytoparasitica.org> (annual publication)
- CSIRO Entomology:  
<http://www.ento.csiro.au/publicity/pressrel/pressrel.html>

# **Text Mining Software**

- **developed for the military intelligence community to use in evaluating intelligence data**
- **advanced query writing skills and familiarity with text mining tools are essential in improving the ratio of records examined versus hits found**



## **Text Mining Software (cont.)**

- **searches open source information for both domestic and international plant health issues**
- **websites, databases, wire services, listservers, trade bulletins, conference proceedings, etc.**
- **does not “crawl” the internet for information, rather pulls records from data sources identified by plant health analysts**

# **Text Mining Project Development**

- **Intellibridge: Pilot Project Initiated**
- **Battelle: Pilot Project Initiated**
- **FAST: Project Underway**
- **Pathfinder: Successful Ongoing CEAH Project**

# **II. The Global Pest and Disease Database**



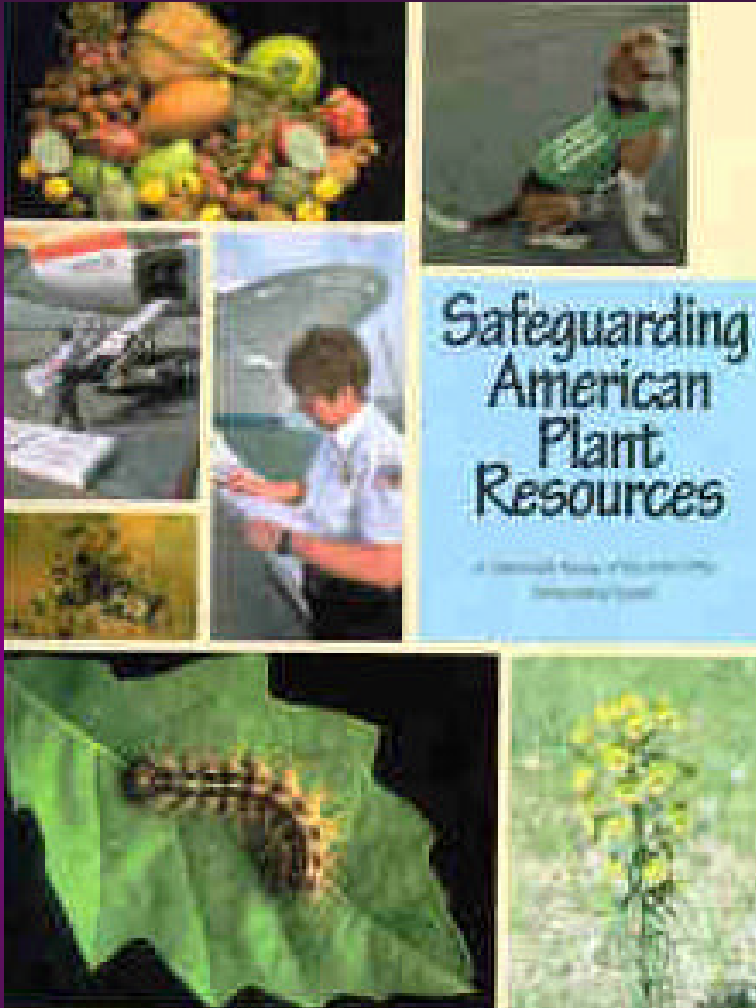
**Woody Bailey**  
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**Karl Suiter**  
NC State University  
NSF Center for Integrated Pest Management  
Raleigh, NC



# Safeguarding Review Implementation



<http://www.aphis.usda.gov/ppq/safeguarding/>

- Addresses PPQ Safeguarding Review Recommendations I-19, 21, 23, 44, and E-44
- An Archive of Exotic Pest Information Specific to PPQ Needs
- Cooperative Agreement with NCSU's Center for Integrated Pest Management

# WHY?

## PPQ Databases/Tracking Systems

- **ACE - Automated Commercial Environment**
- **ACS - Automated Commercial System**
  - **AMS - the Automated Manifest System**
  - **ABI - the Automated Broker Interface**
- **AES - Automated Export System**
- **APHIS Regulated Pest List**  
<http://www.aphis.usda.gov/ppq/regpestlist/>
- **APIS - Advance Passenger Information System**
- **AQIM - Agricultural Quarantine Inspection Monitoring**
- **ATS - Automated Targeting System**
- **EAN - Emergency Action Notification Database**
- **HTS - Harmonized Tariff Schedule**
- **IBIS - Interagency Border Inspection System**
- **ITDS - International Trade Data System**
- **NAPIS - National Agricultural Pest Information System**
- **NAPPO Phytosanitary Alert System**
- **New Pest Advisory Group**
- **OMR Data Warehouse**
- **PIN-OPS - Port Information Network - Operations**
- **PIN- 309 - Port Information Network - 309 module**
- **PRA Tracking Database**
- **Selectivity**
- **Smuggling Interdiction and Trade Compliance Bulletin Board**
- **TECS - Treasury Enforcement Communication System**
- **Vessel Garbage Violation Database**
- **Violation Databases**
- **WADS - Work Accomplishment Data System**

# **Some History...**

- **Workplan Approved and Funded Oct 2002**
- **Cooperative Agreement with NC State co-funded by PDMP and CPHST (FY03 \$200K; FY04 \$290K)**
- **Initiated Jan 2003; Staffing complete Jun 2003**
- **Multi-year Initiative**



# **Global Pest and Disease Database**

- **Establishes a global ‘list’ of pests not known to occur in the U.S. and archives relevant biological data**
- **Assembles the relevant information for each pest into an integrated, user-friendly database**
- **Utilizes the assembled information to rank pests into quarantine risk groups for use in regulatory decision making**
- **Links various database efforts worldwide**

# **GPDD will...**

- **Support pest risk assessments**
- **Provide focus on emerging pests**
- **Identify pests that are threatening the U.S.**
- **Orient development of risk mitigation**
- **Focus off-shore surveys**
- **Emphasize specific taxonomic and diagnostic needs**
- **Focus both port activities and domestic surveys for exotic pests**

# GPDD: User Groups

- CAPS Exotic Pest Detection Program
- AQI (DHS)
- Risk Analysts & Managers
- Offshore Pest Information System



## **The GPDD is...**

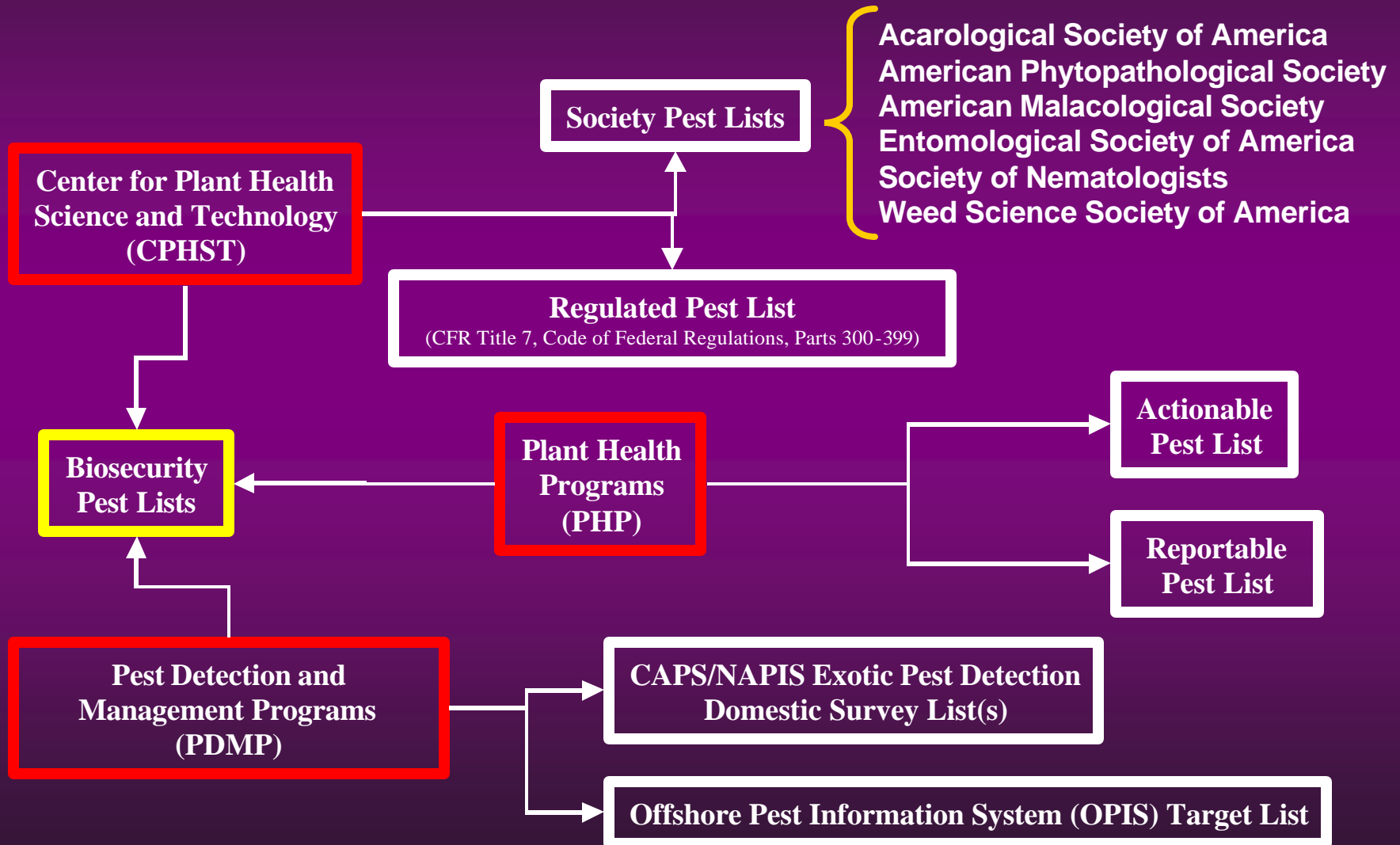
- a data resource that combines unique information with links to other relevant databases to build user-friendly and comprehensive exotic pest profiles

## **The GPDD is NOT...**

- duplicative of existing information systems

# APHIS-PPQ

## Selected Pest List Activities





# **RABID** risk analysis biological informational database

- [Abgrallaspis cyanophylli \(Signoret\)](#)
- [Abgrallaspis sp.](#)
- [Acallurothrips noguchii Kurosawa](#)
- [Acanthocoris dilatatus Horvath](#)
- [Acanthocoris sordidus Thunberg](#)
- [Acanthocoris stricornis \(Scott\)](#)
- [Acanthoecia laminati Heylaerts](#)
- [Acanthonychus jianfengensis Wang](#)
- [Acanthopsyche nigraplaga Wileman](#)
- [Achaea janata L.](#)
- [Acheta domesticus \(L.\)](#)
- [Accleris fimbriana Thunberg](#)
- [Aconophora femoralis Stal](#)
- [Aconophora nitidae Fowler](#)
- [Aconophora projecta \(Funk.\)](#)
- [Acosmeryx naga \(Moor\)](#)
- [Acria ceramitis Meyrick](#)
- [Acrida chinensis \(Westwood\)](#)
- [Acrida cinerea \(Thunberg\)](#)
- [Acrida lata Motsch.](#)
- [Acrida turrita L.](#)
- [Acrobasis tokiella \(Ragonot\)](#)
- [Acrocercops sp.](#)
- [Acromyrmex sp.](#)
- [Acrionicta aceris L.](#)
- [Acrionicta hercules Felder & Rogenhofer](#)
- [Acrionicta intermedia Warren](#)
- [Acrionicta major Bremer](#)
- [Acrionicta pruinosa Guenee](#)
- [Acrionicta psi L.](#)
- [Acrionicta rumicis \(L.\)](#)
- [Acrionicta strigosa \(Shiffermuller\)](#)



United States Department of Agriculture  
Animal and Plant Health Inspection Service  
Plant Protection and Quarantine

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## Mission:

*NPAG assesses new and potential introductions of exotic plant pests into the USA in order to recommend the appropriate course of action. Pests may include arthropods, plant pathogens, nematodes, weeds, and mollusks.*

Once a candidate pest has been identified, NPAG members convene an *ad hoc* panel of members from federal, state and university sources with regulatory and scientific expertise for that particular exotic pest. Through literature searches, data sheet preparation, and discussion with the panel, the NPAG makes recommendations to Plant Protection and Quarantine

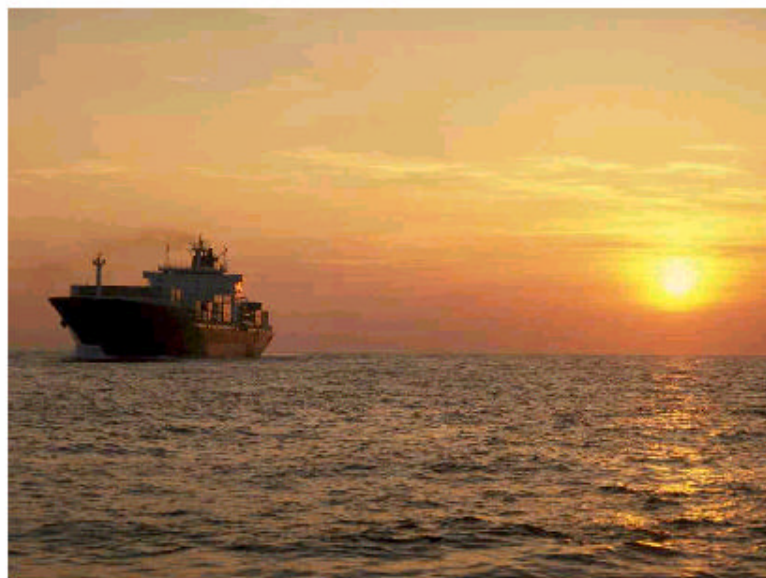


# USDA/APHIS Offshore Pest Information System

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## BACKGROUND

International trade is rapidly expanding; the relevance of international borders is diminishing. With that expansion comes the risk of the spread of exotic plant pests; that threat could be accidental or intentional. The Offshore Pest Information System is a structured, risk-focused process designed to collect, synthesize/analyze, communicate and utilize relevant offshore pest information. Implementation of an information system provides the knowledge necessary to combat these offshore plant pest enemies and enables APHIS to meet its mission element of "safeguarding resources from exotic invasive pests and diseases." This enables the Agency to deal with foreign enemies of our agricultural and environmental resources on an ongoing basis, so that it can respond quickly and effectively to imminent pest threats.



There are four basic pieces to this system: 1) collection of the information, 2) synthesis of the information, 3) use or communication of the information, and 4) research or data support of the system.

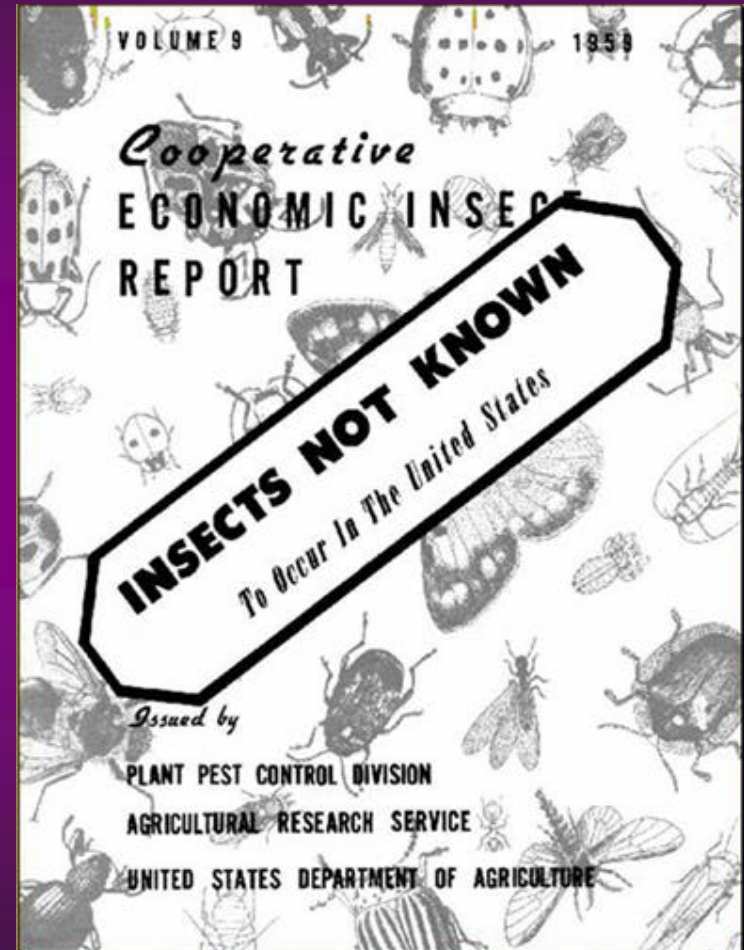
There are several pest issues in foreign countries that might trigger a U.S. safeguarding response including: new pest detections, pest population outbreaks or trends of population buildup, pesticide resistance, pesticide use cancellations or other type of pesticide loss, etc.. The information relevant to these pest issues is a basic item in the toolbox of those responsible for producing and protecting the health of our nation's plant resources. If a fruit fly population in a particular foreign country is at epidemic proportions, shipment of fruit fly host commodities into the U.S. could be a major pathway of fruit flies into the USA.

Homeland Security inspectors at ports of entry need to be aware of such pest situations abroad on a daily basis in order to focus their inspection activities on commodities entering the USA. State plant regulatory agencies also need similar information to concentrate their pest surveys in areas most at risk as identified by local pathway analyses. APHIS risk assessors and trade managers need to know what pest threats exist offshore as they evaluate potential trade opportunities with countries that may harbor pests of concern to the USA. Producers and importers need current pest incidence information before they negotiate sale contracts to ensure

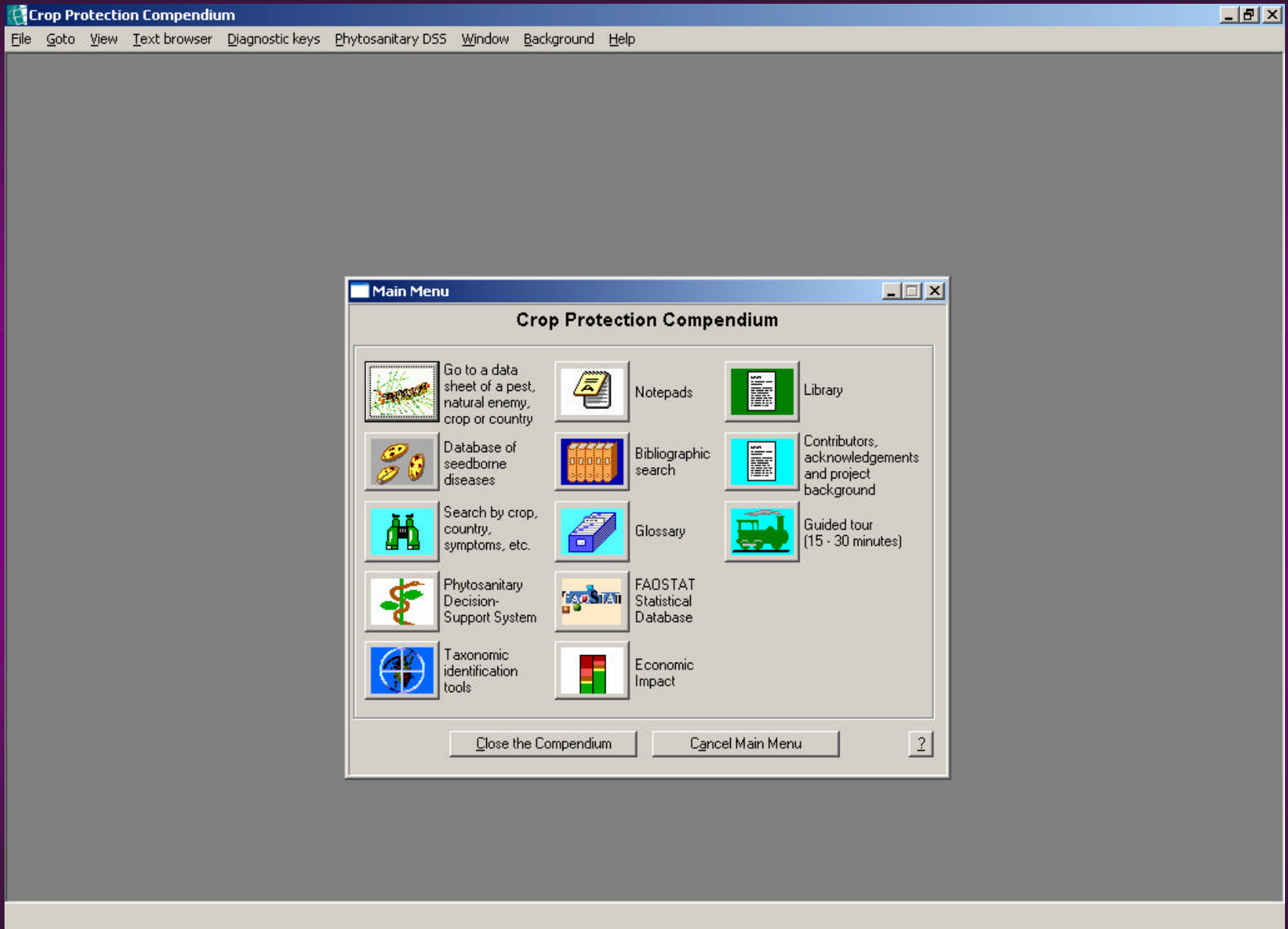
that the products they purchase from Offshore will not be infested with plant pests and suffer quality loss or seizure upon arrival due to infestation/infection.

# INKTO's and PNKTO's

- USDA's Agricultural Research Service
- Insects Not Known to Occur in the United States
  - data sheet series initiated in 1957, terminated 1963
- Pests Not Known to Occur in the United States
  - initiated in 1976, continued through 1987



# CABI Crop Protection Compendium

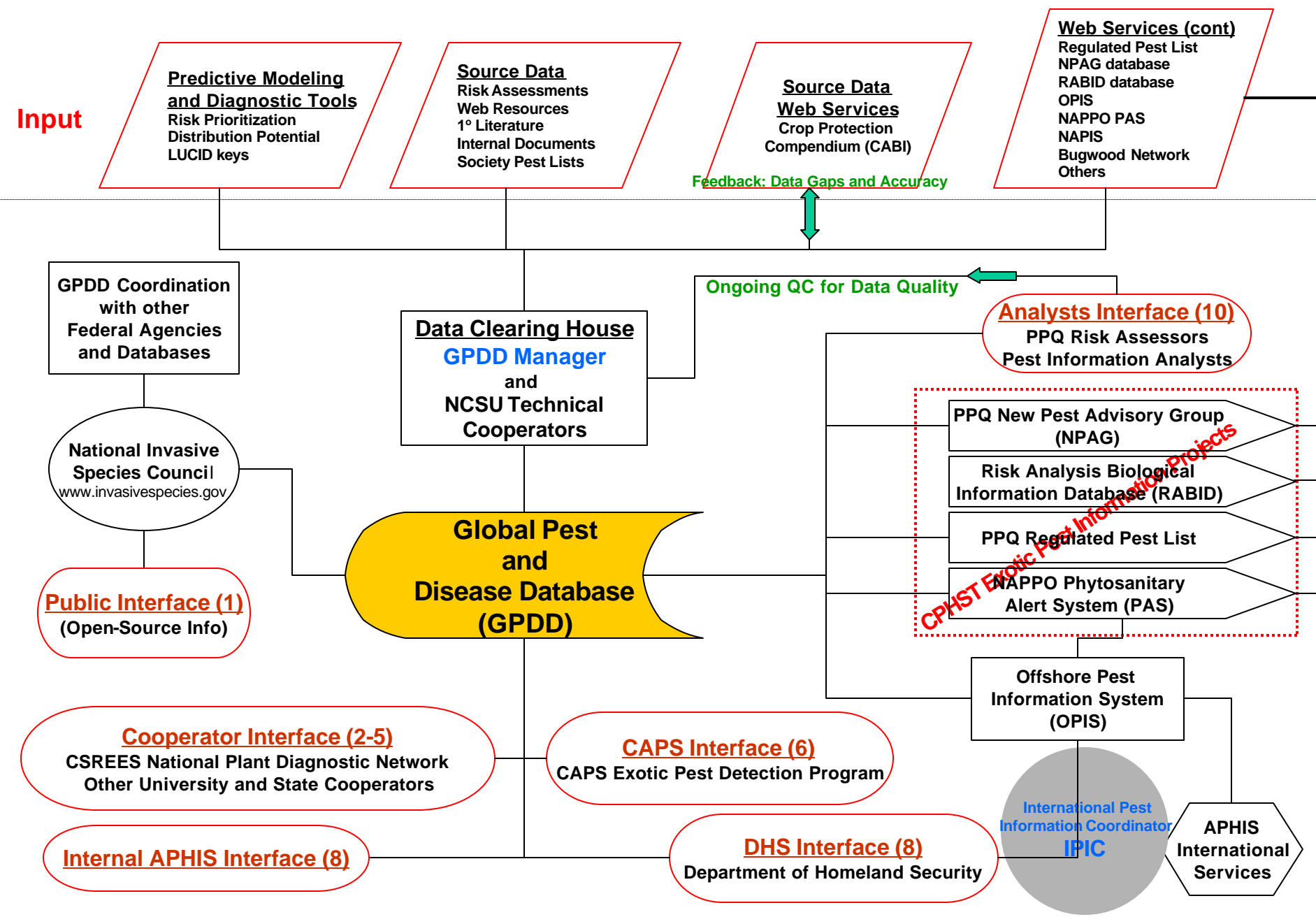






# Projected Timeline

- **Cooperator Staffing and Project Initiation: Complete**
- **Appointment of GPDD Project Lead: Complete**
- **Database testing by CAPS Program: Ready**
- **APHIS Internal Planning Workshops: Ongoing**
- **Stakeholder Information-Gathering Workshops: Ongoing**
- **Database user interface development: Underway**
- **Incorporation of Forecast Modeling and Supporting Database Links/ New Diagnostic Keys (e.g. Lucid): 2003/2004**
- **Continued database additions and refinement resulting in a comprehensive exotic pest database: ongoing, multi-year (5)**
- **Continued database maintenance: ongoing, multi-year**





# **Point of Contact**

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